AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

SEPTEMBER 1, 1936

Vitex Macrophylla

Narrow Upright Trees
Plants for Paved Walks
Sclerotium on Apples
State Convention Reports

AMERICAN NURSERYMAN

Chief Exponent of the Nursery Trade

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SIMILAR.

In the proposals for revitalization or reorganization of the American Association of Nurserymen there has figured largely the affiliation or representation of local, state and regional nurserymen's associations. It is of interest to learn that in another branch of the horticultural industry a somewhat similar undertaking is on foot.

The American Seed Trade Association represents its industry much as does the A. A. N. the nurserymen's field. It is similar in size and in its activities. Like the A. A. N., it held its annual convention at Dallas this year. At that time the retiring president and the incoming president met informally a group of seedsmen from various states to discuss the feasibility of an organized group made up of representatives of state and regional seedsmen's associations, the object being to coördinate the work of such associations with the A. S. T. A. It was decided that the regional and state associations in the seed trade should be advised of the formation of such a group and urged to have an official representative attend subsequent meetings of the group, which are to take place each year during the convention of the A. S. T. A. The group is to be known as the Council of Regional and State Seed Associations.

Such a voluntary coming together of state and regional nurserymen's associations in a national council might be a step toward the goal desired by those proposing revitalization or reorganization of the A. A. N. At any rate, the machinery reaching that goal is yet to be designed clearly. Those nurserymen interested have no doubt by this time studied the latter half of Miles Bryant's presidential address at Dallas, in the August 1 issue of The American Nurseryman, in which he presented at length the findings of the executive committee regarding the proposed plans for reorganization. A significant statement was that, although the plans had been published some months prior to the Dallas convention, not a word of either criticism or commendation had been received. Surely, those interested in a comprehensive national trade organization should express their opinions. Only by obtaining the views of the industry at large can the few men on the A. A. N. executive committee hope to perform a task which will be satisfactory in as broad a way as possible. The message of Mr. Bryant showed thorough study of the proposals and clear thinking on the subject. It should clarify the matter for many persons. It would be worth any nurseryman's time to study that part of the presidential address, and then present his views to the incoming administration, so that this project may have full discussion before any action is taken.

INSECTS FOLLOW DROUGHT.

Unusual midsummer activity of important crop insects is following the widespread hot, dry weather. The heavy grasshopper infestation, known all along to be inevitable because of the enormous number of eggs laid last fall, fully met expectations. July weather accelerated chinch bug migration from small grains and grasses into corn. Two varieties of cricket—Mormon and coulee, both general feeders—have swarmed over parts of the northwest.

Blister beetles—which consume truck and garden crops, grasses, shrubs and flowers—have been generally destructive in Maryland westward to North Dakota and Kansas, notably in areas overrun by grasshoppers in the last few years.

The fall army worm made an early appearance in Florida and North Carolina, damaging grasses and corn. Other serious midsummer pests are the rose chafer, that has damaged corn, garden crops and shade trees in Wisconsin and roses in Minnesota.

After getting off to a slow start, the codling moth increased so fast in June and July that it has already damaged a great many apples in the east central states and now threatens fruit in the middle Atlantic states.

Heavy infestations of red spiders on a wide variety of plants are reported from Maryland westward through Kentucky and Ohio to the Pacific coast and southward to the Gulf of Mexico.

VITEX MACROPHYLLA.

The dainty, graceful big-leaved chaste tree, Vitex macrophylla, is due for great popularity as soon as home gardeners become more familiar with it. This shrub is fairly low-growing, particularly in the north where the top dies back to the ground nearly every winter. But this does not prevent the plant from flowering, for the new shoots produce the branching terminal spikes of lavender blue blooms regularly in August and September. In the north a height of three to four feet is usual, whereas farther south this vitex commonly reaches five to six feet.

The shrub's late-flowering habit and attractive clean foliage, dark green above and grayish green below, are its bid for fame. The palmately compound leaves are made up of five to seven leaflets, as can be seen in the front cover illustration. As to hardiness, unprotected plants in the suburban Chicago area have come through the past few severe winters, when temperatures down to 25 degrees below zero were experienced on numerous occasions, and bloomed every summer. And last winter subzero temperatures lasted for several weeks, though the ground was well covered with snow.

The big-leaved chaste tree, an unfortunate name for sales purposes, because the plant is definitely a shrub, will respond in almost any good garden soil and does best in a sunny spot, though it will tolerate considerable shade. In the middle west some shade during midday is desirable. Propagation can be effected by sowing seeds in spring, layering and rooting greenwood cuttings under glass.

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Narrow Upright Trees

Desirable Less Common Varieties of Much Interest Because of Probable Increased Demand for This Type—By L. C. Chadwick

Some time ago the writer prepared for The American Nurseryman a list of some of the less common narrow upright trees. Since that time a few others have come to his attention which should be added to any list of desirable trees with such a habit of growth.

The narrow upright trees, because of the many uses to which they may be put, will probably be included among the noticeable increases in demand for ornamental plant materials. Because of their rapid growth, the Lombardy and Bolleana poplars have been used extensively for screen purposes. These poplars do not, however, fulfill the need for satisfactory narrow upright types for lawns and narrow streets. Here durability and general satisfaction count for more than rapidity of growth.

During the past few years a number of the leading nurserymen have made available some of the more desirable types. Among them are Acer saccharum monumentale, the sentry maple; Carpinus Betulus pyramidalis (fastigiata), the pyramidal hornbeam; Ginkgo biloba fastigiata, the upright ginkgo; Liriodendron Tulipifera pyramidale, the pyramidal tulip tree; Quercus Robur fastigiata, the pyramidal English oak; Ulmus americana Moline, the Moline elm, and Ulmus foliacea Wheatleyi, the Wheatley elm. Among these desirable forms can be found considerable variation in growth habit. Some are narrow and upright, like the sentry maple, while others spread more widely, the individual branches losing the distinct vertical habit, as with the Moline elm. Some have a compact habit of growth, like the pyramidal hornbeam and Wheatley elm, while others are more loosely branched, as exemplified by the upright ginkgo and the pyramidal tulip tree. Still others have almost parallel sides, such as the sentry maple and the pyramidal English oak. The counterpart of this type, that of a narrow top and a somewhat broader base, is found in the pyramidal hornbeam and the upright ginkgo.

The following types, which may be seen in arboretums and occasionally in nurseries, should find a place in ornamental plantings and should be used much more extensively: Acer platanoides columnare is described as being of columnar habit of growth, with upright branches and smaller, less deeply lobed leaves. Acer rubrum columnare is a columnar form which is somewhat broader and more loosely branched than the other upright maples mentioned. Acer saccharum pyramidale differs from the sentry maple by being distinctly pyramidal, not columnar, in habit of growth.

Ulmus Americana Ascendens.

Tilia americana pyramidale is a narrow, upright, but somewhat loosely spreading form of the American linden. A similar habit of growth is exhibited by the pyramidal tulip tree, as has already been mentioned. A composition of the two would be possible. This linden has been seen only in the parks at Rochester, N. Y.

Ulmus foliacea stricta, the Cornish elm, is seldom seen outside the arboretums. It is a desirable form of the elm, with narrow top, somewhat broader base and individual ascending branches. Ulmus glabra fastigiata, the Exeter elm, is also rare and exhibits a narrow columnar form with strictly upright branches.

Recently in the parks in Rochester a few other narrow upright trees were seen which should be added to the list of desirable types. Comprised in this group were one maple and five varieties of elms.

Acer platanoides erecta, a type of the Norway maple, has been developed in the parks at Rochester and, from limited observations, appears to be a promising type. It is pyramidal in form and quite closely branched, with leaves somewhat smaller than those of the species. It should make

a desirable type for street planting.

Ulmus americana ascendens, also developed in the parks at Rochester, is known there as the Seneca park type of American elm. Some trees as much as forty feet in height have only about a 10-foot spread. Others have developed a somewhat wider-spreading habit. The individual branches are often quite horizontal in their habit of growth, and the tree is rather loosely branched. Again, this type should do well as a street tree.

Ulmus foliacea Webbiana presents a rather unusual appearance because of its folded leaves, that are a little smaller than those of the species. In habit of growth it is fairly narrow and pyramidal, with upright branches. From limited observations, it appears somewhat inferior to the Cornish elm, Ulmus foliacea stricta.

Ulmus foliacea Wredei will find only limited use because of its yellow foliage, that closely lines the short branches. As a distinct accent plant this variety may have a place.

Ulmus hollandica superba, the Blandford elm, is a good addition to this list. The habit of growth is narrow and pyramidal, with ascending and closely compact branches. The bark is smooth, gray and striking. This variety should be of use on narrow streets or small properties.

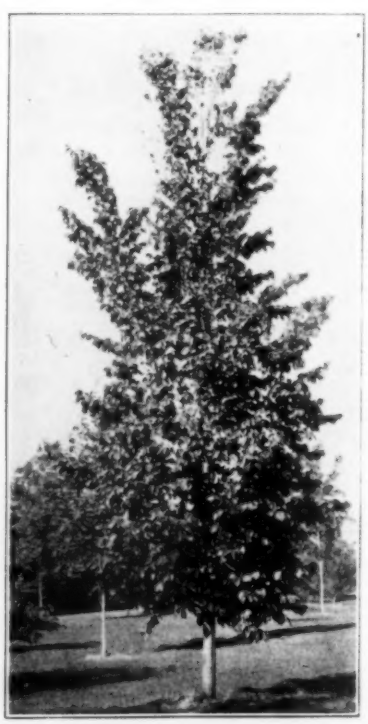
Ulmus procera (campestris) viminalis, willow elm, is somewhat wider than many of the others mentioned, but the branches are upright, spreading and clothed with fairly small leaves. I should rate this variety in the same class as Ulmus foliacea Webbiana. A form of this variety called aurea has yellow foliage. In appearance and usefulness it is similar to Ulmus foliacea Wredei.

Nurserymen will do well to grow some of these upright tree forms, as the demand for them is almost sure to increase.

FRUIT CROPS REDUCED.

The production of fresh fruit in the United States is indicated to be the smallest in a number of years by a special report of the bureau of agricultural economics, recently issued. This is due largely to the damage to fruit buds caused by late spring frost, rather than to the prevailing drought. The apple and peach crops are reported to be the smallest since 1921, while the grape crop is the smallest since 1931. Cherries also are unusually scarce, but pears and citrous fruits promise to be plentiful. Based upon the information now available on the quantities of fresh fruits that probably will be canned and dried, the supply left for the fresh market for the 1936-37 season probably will be seventeen per cent less than what was available last year, and probably three per cent below the average quantity for 1925-29. The supply of commercially canned fruits probably will be about five per cent less than last season, but larger than the 1925-29 average supply and larger than in any of the other recent years. One of the factors contributing to the smaller supply this season is the fact that many Pacific coast canners did not recover their costs on the large fruit packs of 1935 and are attempting to curtail the pack this year. The quantities of fresh fruit produced for canning are not large, but they appear to be ample for all purposes. Supplies of canned apples, apricots, peaches and cherries are expected to be less than last year, but the supplies of other kinds of canned fruit will be larger.

Supplies of dried fruit for 1936-37 are expected to be about eighteen per cent less than in 1935-36, about five per cent less than in 1934-35 and thirteen per cent less than the 1925-29 average. The apple, grape and prune crops were all cut short this season by the late spring frosts and, consequently, the quantities of these fruits that are expected to be dried this year are much smaller than usual. On the other hand, larger packs of dried apricots and peaches are expected.



Ulmus Hollandica Superba

LOW WATER SLOWS GROWTH.

The ratio of root concentration to the number of leaves on the tree has a direct effect on fruit bearing of a pear tree, as shown by tests carried out by the United States Department of Agriculture.

A medium-size Anjou pear tree has more than 1,000 square feet of leaf area, counting the upper surface of the leaf only. In hot weather such a leaf area will lose about one gallon of water per hour during the night and as much as eight gallons an hour during the warmer part of the day. Average evaporation loss through the leaves is estimated at eighty gallons a day.

Unless water from the soil, furnished through the root system, replaces such evaporation losses, a water deficit occurs. This, naturally, slows up food manufacture in the leaves, which interferes with the growth of tree and fruit. The earlier in the day this deficit occurs, the more serious is the damage to fruit and tree.

The experiments, in progress for the past four years, reveal that water shortage in the leaf may occur even when it appears perfectly normal and there is apparently plenty of water in the soil. This led to the discovery that rate of moisture removal from the soil was in direct proportion to the amount of root concentration.

On Anjou pear trees showing the effect of water shortage both the leaves and fruit were thinned twenty per cent early in the summer. These were checked against unthinned trees. The thinned trees soon had a longer daily period before the water deficit occurred, with the result that the fruit grew much faster. Tests with the Bartlett variety produced much the same results.

The results of these tests show that the root system was too small in proportion to the leaf area. This is true particularly on heavy soils in which the feeder root system is not well developed.

Plants for Paved Walks

Second Article Describing Small Perennials That Withstand the Tread of Feet and Permit Easy Travel on Stepping Stones — By C. W. Wood

Continuing the line of thought started in the preceding issue, let us examine a few more plants which are suited to the requirements of paved walks. The need for such plants and their planting were briefly discussed at that time; so these details need not be repeated at this time.

Coronillas.

The genus of legumes, coronilla, furnishes at least two species, cappadocica and minima, for the purposes under consideration. The first-named, because of its height, is better suited to the outer edges of walks, while the latter is an admirable plant for the center areas. Both of these plants have much to recommend them to the gardener, not alone for the use in paved walks, but for other portions of the garden as well. Among their several good points, their ability to thrive with little moisture is of particular importance to most gardeners in this country.

C. cappadocica, which is usually known as C. iberica, is the better known of the two and is to be numbered among the best of rock garden plants, owing to its ease of culture and long-blooming habit. In my northern garden it usually starts blooming in June, continuing in full production for about two months, and then giving occasional flowers until frost. It is a creeping plant, producing its heads of large, yellow, butterfly-like flowers about six inches above the mat of glaucous foliage.

C. minima is a much smaller plant, seldom getting over two inches high. Its flowering period extends over a month or six weeks, commencing here in early June. Both plants require sun for best development and are satisfied with any common garden soil, though I suspect from behavior here that C. cappadocica will give more flowers over a longer period if it is given a rich medium. Propagation is usually from seeds or division, the latter being a slow process. The literature speaks of their being grown from cuttings, though I have had poor results with cuttings from both species taken at all times of the year. My best success has come from layers pinned down in the usual way directly after the main flowering season.

Dianthus.

A number of the pinks are small enough in stature to fit into our present scene. Of the better known ones, Dianthus arvernensis (a tiny form of D. cæsius), D. neglectus in its better forms and D. subacaulis are desirable. But it is D. Peristeri that I want to stress at this time. This newcomer has all the earmarks of a first-class plant, possessing about every feature that the perfect plant should have. It has only been in my garden three years, but that short period leads me to say that it is, everything considered, one of the best pinks of its size for general distribution that I have ever grown. In this garden it does well in every situation that a pink is adapted to, thriving in spite of drought and wind and cold, and flowering over an even longer period than its close relative, deltoides. In fact, it appears to be a miniature form of deltoides, making a cushion of tiny, bright green leaves, studded all over with brilliant pink flowers. The entire plant is not over an inch or two high. It is just as easy to grow as the maiden pink and is vastly superior for our present purpose. I am sure that growers of hardy plants will make no mistake by stocking this delightful little pink. It may, of course, be grown from seeds, but it is important to see that the seeds are from the true plant and are grown far from similar pinks, for these members of the dianthus family are notoriously lax in their morals, mixing with their neighbors in a scandalous manner. A better way is to grow your stock from cuttings of the true material. That may be done at almost any time during the growing year, though I prefer early spring. Rub off the stems with a heel and root them indoors in a cutting bench.

Drabas.

One could fill a garden with the 150 or more species of draba, but such a planting would be a rather monotonous picture. One could likewise fill an entire paved walk with these little crucifers, but no one would want to do it. On the other hand, a few of the tiny ones are needed in all such plantings, not alone for their generous display of usually white or yellow flowers in spring, but also for the charming foliage masses of some of them.

About the best species for paved walks that I have grown is repens, a yellow-flowering plant of early spring. It is a stoloniferous plant, spreading into broad masses of loose foliage, which serves as a foil for the bright yellow flowers on 4-inch stems in early spring (late March or early April in northern Michigan). If it is sheared back directly after flowering, it usually gives another display in autumn. This is an easily propagated plant, division of the stools giving an endless number of plants.

There are a number of rosette-making drabas that are suited to paved walks, but they should be kept away from the areas used for travel. That is not because of their height, for most of them are only an inch or so tall, but rather because their habits of growth do not permit rough usage, particularly the punishment inflicted by high heels. Some of them, like D. athoa and D. imbricata, are entirely too delicate for such treatment, needing the moraine for their well-being in our trying climate. All these aside, there are plenty of good easy ones for our purpose. Two, D. Kotschyi (D. androsacea of gardens) and D. Haynaldii, the first with white flowers and the second with yellow and both plants not over two inches tall, are perhaps sufficient for our purpose. They are both charming plants of easy culture in sunny, well drained situations. They are best propagated from seeds. This is a meager treatment of so large a genus, but is probably sufficient for the present subject.

Globularias.

Two, at least, of the globe daisies, Globularia bellidifolia and G. nana, are good plants for paved walks, especially for the so-called crazy paving with rather wide areas between the stones. Both of these plants

are easy to handle, resisting much abuse in the way of dry weather and competition. They make dense mats of tiny, wedge-shaped leaves, which are almost sessile on woody, prostrate stems. Both plants have heads of blue flowers, the first-named on 2-inch stems and the other on 1-inch. This account of G. bellidifolia is contrary to most American authors, who refer this name to G. spinosa, a 6 to 10-inch plant from Spain with obovate leaves and a 2-lipped calyx, but I think this classification is in line with European students of the genus. In any event, both plants are worthy of far more attention than they now get. They are easily grown from seeds and may be multiplied by division. I find G. nana rather slow to grow from cuttings, but G. bellidifolia is among the easiest of plants to root.

Gypsophilas.

The small gypsophilas are all fine plants for our purpose, though, for obvious reasons, they should be kept back from the central line of travel. It is unnecessary to dwell upon the well known G. repens, and a few words will suffice for G. cerastioides and G. fratensis. The first of the last two named makes a mass of hairy foliage over which is displayed a carpet of large, white flowers, plentifully in June and occasionally from then until autumn. The entire plant is not over two inches tall. G. fratensis has clear pink flowers on 3-inch stems. Both require typical gypsophila treatment, which calls for little more than sunshine and good drainage, and both are propagated from seeds.

Hypericums.

There are a number of small St.-John's-worts suited to the purposes under consideration, though their natures and growth habits call for a position at the sides of the walks. None of the small ones has proved entirely hardy in my garden in latitude forty-five degrees, with the possible exception of Hypericum humifusum, and its greatest recommendation, according to my experience, is its ability to grow in quite dense shade. The following species of hypericum will be found useful for paved walks, none of them growing over four or five inches high: Athoum. ericoides, fragile, humifusum, Kotschyanum, origanifolium, repens and reptans. All have yellow flowers in the typical hypericum manner and are easily grown from seeds.

Herniarias.

None of the ruptureworts is an exciting plant and none is long-lived in my garden, though they all self-sow freely, perhaps with too much abandon, for they cause much weeding in our sandy soil. The flowers are of no account, the entire value of the plant residing in its foliage. The species of greatest value, so far as I am acquainted with the genus, is Herniaria glabra, with its close mat of mossy foliage, not over an inch or two tall. It is so small that it can be used in the smallest interstices in any situation that is not forbidden because of its self-sowing. Propagation is from seeds or division.

Linarias.

The linarias offer an immense amount of material, much of it of annual duration, which will not be mentioned at this time. The perennial kinds are plants for southern gardens, none of them, with the possible exception of L. glacialis faucicola, being hardy enough for my northern climate. Perhaps the ones of greatest value in the paved walk are the two little creepers, æquitriloba and hepaticæfolia, both making a film of foliage for a ground cover and bearing from June until frost flowers of pale mauve in the first case and lilac in the latter. In my experience, neither of these plants can stand winter and spring dampness, a fact which calls for perfect drainage. It is fortunate, then, that they can get along on a small amount of moisture. Given good drainage and a not too severe climate, they should prove to be two of the best plants for paved walks. L. alpina is of equal value, except that it gets two or three inches tall and must therefore be relegated to the outer edges of a walk. In northern gardens it has all the drawbacks of the other two mentioned and, in addition, needs a little more moisture. I should like to say more about L. glacialis faucicola—a plant of much promise—but it has not been with me long enough to pass final judgment. Linarias may all be grown from seeds, divisions or cuttings with a fair degree of success.

THE mousetrap theory that the world will beat a path to one's door has few believers among successful business firms. The one sure way to get business is to go out after it.

TEST WIND DRIFT OF INSECTS.

Wind drift indicates the probable spread of the European elm bark beetle and a possibly resultant spread of the Dutch elm disease.

Over 4,900 small, yellow, hydrogen-filled balloons have been released by the Bartlett Tree Research Laboratories, mostly from Stamford, Conn., though several hundred were liberated from New Jersey and New York localities. Over three per cent of the balloon tags have been returned.

The returns show a marked concentration along the south shore of Connecticut, including all of the present Dutch elm disease regulated area and with scattering returns from New Haven, Guilford, Clinton and Sound View, Conn., the last only a few miles from Old Lyme, where several diseased elms have been found. One tag was returned from Westerly, R. I., and another from off the Nantucket light ship, the last a drift of 155 miles. There was a northeasterly drift to Hartford, Middletown and South Coventry, Conn., and Upton and Boston, Mass. The southeasterly drift was over much of the eastern two-thirds of Long Island, a notable feature being the return of three tags from Center Moriches, two dropping within sixty rods of each other on the same farm. There was a less marked northwesterly and southwesterly drift to portions of New York state and parts of Long Island. The 100 balloons freed one day at the Morristown national historical park in New Jersey drifted easterly, most of the balloons dropping on western Long Island, one drifting to Westhampton Beach. The balloons released at Yonkers, N. Y., drifted to the northeast, mostly to areas about Bristol, Conn. The returns indicated for several a drift of thirty miles an hour. The velocities and length of the drift are low compared with 1923 and 1924, with velocities up to 65 and 100 miles an hour and distances of 400 miles and in one instance 775 miles.

Balloons tend to drop near the water and the distribution of the recovered tags this season indicates in a general way areas where diseased elms may possibly occur.

EXPERIMENTS have shown that fertilizer applied to the soil moves downward, but not sideways to any extent. Hence the necessity of spreading it evenly, especially over plant roots, to avoid concentrations which may be injurious.

Sclerotium Disease on Apple Trees

Fungus Attacking Herbaceous Plants in the Southern States Also Infects Apple Trees in the Nursery—By J. S. Cooley, United States Department of Agriculture

Occurring primarily in the southern states is a disease caused by a fungus, Sclerotium rolfsii, which attacks a wide variety of herbaceous plants, such as the tomato, pepper, sweet potato, beet, etc. The collars of young tender stems are readily attacked by the fungus, and older, woody tissues of herbaceous plants are sometimes affected. It is not so well known, however, that the fungus may infect apple trees while they are growing in the nursery.

The local and common names applied to this disease, such as southern blight and root blight, are confusing, especially in reference to nursery trees where blight has a fairly definite significance. It is, therefore, suggested that it be designated as southern sclerotium disease.

During the summer of 1935, this sclerotium disease was observed on nursery apple trees sent in for diagnosis from one Tennessee nursery and from two Maryland nurseries. One nurseryman reported losses from what he considered to be this disease for the past eight years, the losses sometimes reaching five per cent. The disease has been observed affecting one and two-year-old grafted and budded trees.

The first obvious sign of the disease is the dying of lower leaves on trees scattered throughout the nursery. Death of affected trees quickly follows. A white mold growth appears both at the collar of the tree and on the soil around the tree at about the time the top shows some dead leaves. Soon afterward, there appear a number of brown, rounded fungous growth (sclerotia), about the size and appearance of mustard seeds, as shown in the illustration. These vegetative fungous bodies, though they are not seeds, serve to reproduce the fungus in a somewhat similar manner. They lie in the soil, probably for a long time, and withstand drying or other adversity. When suitable conditions again obtain, they will start into growth and the fungus be ready to attack susceptible plants. Our observation has been that when a nursery tree is attacked by the fungus, it is killed the same season.

Unlike most fungi, the fungus causing this disease is not known to produce fruiting bodies capable of being borne on air currents to other plants. In the main, its distribution must depend on growth through the soil and the dissemination of vegetative reproductive bodies by natural or mechanical means. Such restricted means of distribution apparently accounts for the scattered appearance of this fungus in a block of nursery trees. Although the sclerotium fungus is an active parasite when conditions are favorable for its growth, its limited means of distribution and its exacting growth requirements reduce the likelihood that it will cause heavy losses in any one block of trees.

Specific control measures are not as yet known, although certain cultural practices may appreciably lessen the losses from this disease. An important aspect of control is being able to recognize the disease and to note under what local conditions it thrives. The appearance of the disease on a young apple tree, as has been described, is shown in the illustration.

Sclerotium on Apple Nursery Trees.
Budded apple tree during first summer girdled in nursery row by sclerotium disease. Arrows point to sclerotia, mature at right and immature at left.

A knowledge of the prevalence of the disease on weeds and other plants, including cover crops, in the nursery would be helpful in control measures. The character of the land on which the nursery is located may be important. The disease has been more often observed in spots that are more moist than is necessary for the growth of apple trees. It is suggested, therefore, that a well drained site be selected for the apple tree nursery. As to the rotation to use following a block of apple trees where the disease is present, more information is necessary. We need to know more concerning the relative susceptibility of various crops that might be grown in a rotation with apple trees or other susceptible plants. It is suggested that crops which are known to be susceptible, such as tomatoes, be eliminated from the rotation with apple trees.

In order to learn more concerning the prevalence and distribution, the writer would be glad to receive specimens of plant material suspected of having this sclerotium disease. There is reason to believe that, in addition to the apple, it may be found attacking the root tissues of other woody plants.

WELL FED BERRIES HARDY.

Winter hardiness of some of the berries, particularly raspberries, is not entirely a matter of winter temperatures or snow cover, as many have supposed. It is the well fed raspberry plant that endures cold winter weather. When the summer climate is favorable to development of anthracnose (gray bark) and leaf spot, the plants are defoliated and go into the winter weakened and with scant reserves of food, says George M. Darrow, of the bureau of plant industry. The result is winter injury. In Maryland, for example, where winter temperatures are relatively mild because it is near the southern border of the raspberry range, there has been much winterkilling among varieties that are known to be hardy even in Canada. To prevent winter injury, growers need to spray regularly in the summer for control of fungous diseases.

Deciduous Tree Grades

New Classifications Adopted by A. A. N. as Submitted by E. C. Welch, Chairman of Standardization Committee

Last year the standardization committee was instructed to publish the latest revised edition of "Horticultural Standards," including grades for all fruit plants which had been adopted at the Cincinnati convention. The publication of that booklet covers about all of the activity of the committee during the year except that we have been considering the matter of reclassifying the grades for deciduous trees.

Under our old standards the only provision for deciduous trees was merely the general classification as to height and caliper. Following is the report covering the proposed classifications of deciduous trees:

Classification No. 1—Strong-Growing Varieties.

Heights shall be given in single feet up to six feet; examples, 4 to 5 feet, 5 to 6 feet. Over six feet give in double feet; examples, 6 to 8 feet, 10 to 12 feet, 12 to 14 feet. Caliper shall be taken six inches above the collar.

Caliper (inches)	Average height (feet)
1 to 1¼	8 to 10
1¼ to 1½	8 to 10
1½ to 1¾	10 to 12
1¾ to 2	10 to 12
2 to 2½	12 to 14
2½ to 3	12 to 14
3 to 3½	14 to 16
3½ to 4	14 to 16
4 to 5	16 and up
5 to 6	16 and up

The grades specified above for strong-growing species of deciduous trees will cover general varieties such as:

Acer dasycarpum	Fraxinus in variety
Acer Negundo	Liriodendron
Acer platanoides	Platanus occidentalis
Acer rubrum	Platanus orientalis
Acer saccharum	Populus in variety
Ailanthus	Robinia Pseudacacia
Catalpa speciosa	Ulmus in variety
Celtis (hackberry)	

Pyramidal-type trees, such as Lombardy poplars, should have a single, well defined stem, with well spaced side branches starting from or slightly above the ground.

All trees should have straight stems according to habit of growth. All trimming scars shall show healing growth and no such scars shall be more than three-quarter inch in diameter. Tree trunks shall be free from abrasions, splits or cracks.

Classification No. 2—Medium-Growing Trees.

Heights shall be given in single feet up to eight feet; examples, 4 to 5 feet, 6 to 7 feet. Over eight feet, in double feet; examples 8 to 10 feet, 12 to 14 feet. Caliper shall be taken six inches above the collar.

Caliper (inches)	Average height (feet)
1 to 1¼	6 to 8
1¼ to 1½	8 to 10
1½ to 1¾	9 to 11
1¾ to 2	10 to 12
2 to 2¼	11 to 13
2¼ to 2½	12 to 14
2½ to 3	13 to 15
3 to 3½	14 to 16
3½ to 4	14 to 16
4 to 5	16 and up
5 to 6	16 and up

The grades specified above are for medium-grown varieties of deciduous trees and will cover general varieties such as:

Acer Schwedleri	Sassafras
Æsculus	Sorbus Aucuparia
Alnus	Tilia in variety
Betula in variety	
Ginkgo	Salix in weeping varieties:
Gleditsia	Caliper (inches)
Juglans cinerea	¾ to 1
Juglans nigra	1 to 1¼
Larix	1¼ to 1½
Liquidambar	1½ to 2
Magnolia tree sorts	2 to 2½
Morus alba	Average Height (feet)
Morus tatarica	6 to 8
Ostrya	8 to 10
Phllodendron	9 to 11
Quercus alba	10 to 12
Quercus coccinea	11 to 13
Quercus palustris	
Quercus rubra	

Semipyramidal type trees, such as betula in variety, liquidambar, magnolia (tree sorts), salix in variety, sassafras and sorbus in variety, should have branches starting nearer the ground with 2 to 4-foot stems, or halfway up the stem, as has been the customary practice for years. All trees should have straight stems according to habit of growth.

No. 3—Slow and Dwarf-Growing Trees.

Heights shall be given in single feet up to eight feet; examples, 4 to 5 feet, 6 to 7 feet. Over eight feet, in double feet; examples, 8 to 10 feet, 12 to 14 feet. In this classification fall many species and varieties that could be classed as strong-growing shrubs, as shown in shrub classification No. 3. For a more complete or detailed grading the following is recommended. Caliper is not absolutely binding, but stock should not deviate unduly from caliper given to be of proper weight and quality. Caliper taken at the ground.

Caliper, minimum (inches)	Height (feet)
½	2 to 3
¾	3 to 4
1	4 to 5
1	5 to 6
1¼	6 to 7
1¼	7 to 8
1½	8 to 10
1¾	10 to 12
2	12 to 14
2½	14 to 16

Plants of this type can be either single stems, with ample, well spaced side branches, or can be multiple-stemmed. The object is to avoid thin, unbranched plants that have been crowded in the nursery row.

The grades specified above are for slow and dwarf-growing varieties of deciduous trees and will cover general varieties such as:

(*) These varieties eventually grow into large or moderately large trees, but do not show this tendency in the nursery.

Acer Ginnala	*Fagus sylvatica
Acer pennsylvanicum	*Gymnocladus dioica
Acer spicatum	Halesia tetraptera
Carpinus Betulus	Kœlreuteria paniculata
Carpinus caroliniana	Laburnum vulgare
Carpinus japonica	Magnolia glauca
*Cercidiphyllum	Magnolia Kobus
Cercis canadensis	Magnolia parviflora
*Cladrastis lutea	Magnolia Soulangeana
Cornus florida	Magnolia stellata
Cornus Kousa	Malus in variety
Cornus rubra	In grading, height to govern.
Cratægus in variety	Nyssa sylvatica
To be grown naturally without much pruning; in grading, height to govern.	Oxydendrum arboreum
*Diospyros virginiana	Prunus in variety
Evonymus atropurpureus	In grading, height to govern.
Evonymus Bungeanus	*Sophora japonica
Evonymus europæus	Sorbus americana
Elæagnus angustifolia	Styrax japonica
*Fagus americana	Styrax Obassia
	Syringa japonica
	*Taxodium distichum

As many of these species or varieties may be called strong-growing shrubs and grown in that manner, it is not necessary to have a single stem, and branches may begin at the ground, although a well defined central stem is desirable, as many planters prefer to trim up the lower branches.

Additional Tree Specifications.

ROOTS—As a general rule, the roots should have a diameter or spread measuring in feet equal to the caliper of the trees in inches; example, caliper, two inches; root system, two feet in diameter.

CLUMPS—Shall be trees with three or more stems from the ground. Best example is white birch.

STREET TREES—Unless otherwise specified, 10 to 12-foot street trees are to be free of branches five feet from ground; 12 to 14-foot trees, six feet from ground; 14-foot and up, seven feet from ground. Street trees should have straight stems, not deviating more than three inches in the trunk, up to the branches, from a central line with well defined central leaders. All trimming scars shall show healing growth and no such scars shall be more than three-quarter inch in diameter. Trunks shall be free from abrasions, splits or cracks.

TOP-WORKED TREES—Height of stem and age of top should be specified on top-worked trees.

BALLING—Where trees are to be dug with ball, the diameter of the ball shall be in the ratio of one foot for every one inch caliper; examples, a 1½-inch caliper should have 1½-foot ball, 3-inch caliper, 3-foot ball. Balls should be dug by spading away to leave ball intact and solid before being wrapped in burlap and securely tied or sewn, up to and including 4-foot trees.

Careful consideration should be given to the question of varieties and grades of trees on which balling and burlapping is specified. Generally it is not advisable or necessary to ball and burlap most varieties of deciduous trees which are graded by caliper under three inches in diameter.

Only for Nursery-grown Material.

These grading rules apply only to nursery-grown material that has been transplanted at least once for the smaller sizes and more times for larger sizes. Root-pruning, when completely done, may serve in place of later transplanting, but all sizes must be at least once transplanted. Trees should have sufficient fibrous roots to transplant safely.

Collected wild or seedling stock must be so named. There is great difference in this type of material and properly grown nursery stock, not only in transplanting qualities, but appearance, and so forth.

Because of lower quality and greatly reduced results of collected stock and the unfair competition between collected stock and nursery-grown, too much emphasis cannot be placed upon the insistence of clearly stating when material is not nursery-grown. This is a protection for the buying public, many of whom do not appreciate the difference, and a protection for legitimate nurserymen as well.

There has been some demand and discussion on the question of grading of caliper of deciduous tree seedlings. In a good many sections they are grown and distributed. In one section of the west a large number of Chinese elm seedlings are grown and distributed, and some growers have adopted the caliper grade as well as height. They naturally grow rather slender, and the caliper grade is advisable. There are other seedlings for which the caliper grade might be desirable. That is a matter which might be considered by a future standardization committee.

Visit New York Experiment Station

Summer Meeting of the New York State Nurserymen's Association Draws 150 to Inspect Plantings at Geneva

"One of the best summer meetings of the New York State Nurserymen's Association that I have ever attended," was the comment of Henry Maxwell, mayor of Geneva and president of the Maxwell-Bowden Nursery Co. "The only thing wrong was that there was not time to see in detail all the things there were to see," said Paul Fortmiller, secretary of the Jackson & Perkins Co. These two remarks really characterize the meeting at the state agricultural experiment station, at Geneva, August 20. It provided not only a day of information and contact with the research program of the experiment station and Cornell University, but it provided also a day of pleasant outing and opportunity to meet friends and acquaintances in the nursery business.

Nearly 150 were in attendance, including a few fruit growers and gardeners interested in the production of fruit trees and in ornamental plantings. All in all, it was a splendid meeting and one in which the president, W. J. Maloney, of Dansville, may well take pride and satisfaction. To be sure, those at the experiment station and at Cornell University coöperated in making it a success, but it was his conception and his energy which brought the thing about.

Assembling in Jordan hall at the experiment station at 1:30 p. m., the group first heard Prof. P. J. Parrott, vice-director and entomologist of the experiment station, review the lines of work available at the station which might be helpful to nurserymen. In addition to the general line of nursery problems on which the nurserymen were instrumental in starting investigations a few years ago, there are projects on soils, cover crops, new varieties of fruits and control of insects and diseases on ornamentals and deciduous plants. Moreover, there are projects in related fields, which, although not listed directly as nursery problems, nevertheless, do have application and information relative to the nursery industry.

Test for Peach Seed.

Of direct application, yet the outgrowth of a related field, is the test for non-after-ripened peach seed which has recently been introduced by Dr. H. B. Tukey and M. S. Barrett. By this method it is possible to secure an approximate germination test within seven to ten days, whereas by the after-ripening method ten to twelve weeks are required. The method rests upon the principle that a peach pit is not a seed, but merely contains the seed. The pit is part of the fruit that became hard and inedible. Accordingly, a pit is no indication of the viability of the seed within. By cracking the pit, removing the seed coats and adjacent tissues from the embryo, and placing the naked embryo on nutrient agar in bottles, under sterile conditions, a test of the viable embryos may be secured. Those which begin growth in the bottles in a week or ten days may be counted as likely to germinate in the field. Nurserymen have been quick to recognize the value of this test and have been making use of it before planting peach seed in the fall of the year.

Since the Geneva experiment station has been a leader in the origination and introduction of new fruits, there was considerable interest in the treatment of this phase of the program. Prof. Richard Wellington told about some of the newer apples, such as Kendall, Macoun and Milton, all of McIntosh type; the Gorham pear, which ripens several weeks after Bartlett, but which is of Bartlett type; the Fredonia grape and other early-ripening types of promise; the need for plums of improved quality to replace Arch Duke and other mediocre plums, and the value of the several new peaches ripening earlier than Elberta, such as Oriole, Golden Jubilee, Valiant, Vedette and Veteran. Mr. Einset prepared an interesting display of some of these peaches.

Discuss New Fruits.

Discussing the small fruits, Prof. G. L. Slate mentioned the Newburgh red raspberry as having won its way into commercial approval. Two other new red varieties of promise are the Taylor and Marcy, the latter being characterized by having perhaps the largest fruits of any red raspberry yet produced. The Sodus purple cane, free from mosaic, is considered likely to replace Columbian. The new Indian Summer fall-bearing red raspberry was said to be the best fall-bearing raspberry yet to be introduced and quite in a class by itself.

Dr. F. L. Gambrell presented an interesting display of insect troubles attacking ornamentals and nursery stock. These were represented both by fresh materials and also by colored transparencies. Information is of value upon the symptoms, life history and method of control of the spruce gall aphis, pine-leaf scale, oriental peach moth, tarnished plant bug, peach borer, cherry aphis, spruce needle miner, strawberry root weevil (attacking evergreens) and the arbor-vitæ scale. The time is approaching when nurserymen will find it worth their while to know the methods of control for these troubles and to practice them.

W. J. Maloney.

Tour of Grounds.

After the assembly meeting, an organized tour was made to points of interest on the station grounds. The first stop was to see the plantings of trained apple trees against the walls of the horticultural building, of McIntosh, Baldwin and Delicious apples on Paradise rootstocks. These trees have made a good performance trained to palmettes, U forms and horizontal cordons. While limited in their usefulness, they do have possibilities as judged by the success of the plantings.

The Adams elderberry was seen in passing, a high-yielding vigorous variety well worthy of more extensive planting. A visit to some of the peach work under way showed some yearling peach trees formerly infested with borers which had been salvaged from the brush pile by treatment with paradichlorobenzene and cottonseed oil. The trees were doing well, indeed, and suggested the practicability of treating all peach trees by this method so as to remove the possibility of introducing any peach-tree borers into the orchard. The difference was shown between the injury of the oriental peach moth and the tarnished plant bug to trees in the nursery. As yet no effective control has been devised for the tarnished plant bug, although the general vigor and tone of the plantation is regarded as of great value. For the oriental peach moth, parasites are being bred which, when liberated in the vicinity of infested plantings, have given a fair measure of control.

In cars, the tour next proceeded past the nursery cellar on the station grounds, past the orchard in which various light traps are being used to attract insects for insect control, past the plots where breeding is being conducted with small fruits, grapes, apricots and apples, and finally to the acreage set aside for work on plant propagation and rootstocks.

First to be seen here was the beneficial response secured from the use of granulated peat moss as a top-covering in seed beds. In a test with Mazzard seedlings, the number of seedlings from peat-covered beds was 5,354, as compared with 2,056 from soil-covered beds. The moss is applied wet and placed half an inch deep over the seed when planted. Apparently its beneficial result lies in retention of moisture, thus preventing the baking and drying out of the surface soil.

Insect Control.

A discussion of aphis and leaf hopper control followed, led by Dr. Gambrell. It was pointed out that there are two types of leaf hoppers. One sucks juices from the phloëm tissue of the leaf and therefore is susceptible to copper sprays which enter the transpiration stream of the plant. The other does not feed in this way and is not susceptible to such treatment. A good general-purpose spray is made up of Bordeaux mixture, arsenate of lead and nicotine sulphate. This has been used for many years on the station

grounds and has been very effective. The difficulty experienced in finding aphis and leaf hoppers for demonstration was sufficient proof to the group that these materials, when thoroughly applied, make a good nursery spray.

A display was seen of rhododendron seedlings in flask culture prepared by H. T. Skinner, of Cornell University. Prof. C. J. Hunn showed the application of leaf bud cutting methods to such ornamental plants as rhododendron and mahonia. Mr. Brase discussed the production of multiflora rootstocks. From a small planting of multiflora on the station grounds, seed is collected in the fall of the year, stratified immediately in peat moss stored in the nursery cellar and planted in coldframes in the spring, with a light covering of peat moss. A good many thousand plants can be grown rather easily by this method. In addition, it was pointed out that multiflora will root well from softwood cuttings taken in early July.

Replacement Losses.

Dr. Tukey discussed the losses to nurserymen through replacements of stock which fails to start in the spring. Tests have been conducted for several years in an effort to determine the factors which cause poor growth. It has already been shown that if nursery stock is not properly mature—that is, if it is dug prematurely or if the leaves are lost through insect or disease attack—the stock fails to accumulate sufficient food materials to make vigorous growth the following spring. On the other hand, injections of fertilizers into the trees and applications of fertilizers in the nursery just before the trees are dug have not given any improved performance in the orchard. Apparently, if the trees are properly matured and handled by recognized nursery methods, they reach the orchardist in sufficiently good condition to make a good record. Recent tests indicate that some of the fault lies with the planter and that nurserymen are frequently falsely blamed for losses.

As one by one the various factors are eliminated in this series of tests, it appears more and more that the problem is one of water relation. That is, nursery stock must be planted so that the movement of water from the soil into the tree is established promptly and is continuous. In dry seasons, or when the trees are not well set, considerable loss may result, the nurseryman being in no way responsible. One test was shown in which wet granulated peat moss had been placed about the roots of apple trees in the hole at planting, and the trees firmly planted into place. A 12-quart pail of peat moss was used to each tree. Trees so planted made a terminal growth of eighty-eight inches per tree, as compared with twenty-seven inches per tree from those not so treated. Furthermore, the growth the second year continued to be superior. The demonstration was quite striking, and the growth of the peat-treated trees quite superior.

New Rootstocks.

In the quest for new and improved rootstocks, interest has centered on Pyrus betulæfolia, the birch-leaved pear from the orient. It has fruit slightly larger than a pea and produces both a large quantity of seed and also seedlings which are vigorous and relatively resistant to leaf spot and blight in the nursery. In addition to its good nursery habits, it has given superior trees when worked to Bartlett, Kieffer and Seckel. On the other hand, Anjou fails to unite with this stock. In the experimental plantings it could readily be seen that Kieffer does much better either on its own roots or on some of the oriental stocks—Kieffer, of course, contains oriental blood. On the other hand, varieties of French pear, such as Bartlett, Anjou and Winter Nelis, do generally better on French pear roots, including seedlings of Bartlett and Winter Nelis. Pyrus Calleryana is too tender for the east, and the Japanese pear has proved inferior, as well, and should not be used further.

In growing seedlings, there are three possible sources of seeds; namely, (1) random seeds from unknown sources, such as wild sources and mixed domestic supplies; (2) seeds from particular varieties in which one of the parents is known, as Ben Davis, Rome, Delicious and McIntosh apple seeds, Winter Nelis and Bartlett pear seeds (Rhode Island Greening, Baldwin, Gravenstein and Tompkins King apple seeds are worthless for seedling production, and Seckel and Tyson pear seeds are inferior); (3) seeds from crossing two known varieties, so that both parents are known. One of these successful crosses is that between Mercer County crab and Brier Sweet apples, which gives vigorous seedlings of high uniformity, producing splendid orchard trees. Prof. T. J. Maney, of Iowa State College, has been a leader in this field and has made a definite contribution toward improvement of rootstocks by his attention to seed supplies. Certainly, the trees worked on rootstocks raised from the cross between Mercer County crab and Brier Sweet looked unusually uniform and vigorous.

As a possible improvement upon seedling rootstocks, there are the so-called vigorous stocks produced from layers and cuttings. They are useful, as explained by Dr. Tukey, not alone because of their possible greater uniformity, but also because they may be used to control the performance of the tree in the orchard. For example, stocks of this type are available and others will eventually be forthcoming, which will adapt certain varieties to certain regions and which will produce a fruit tree of a particular type to meet particular needs. Already there is need in America for a slightly dwarf tree—not the dwarf tree thought of as produced by Paradise and Doucin stocks, but a still more vigorous tree, yet one which is not so large as the standard now in common use. Some of the rootstocks under test, such as Nos. XII, XIII and XVI, give promise of producing vigorous orchard trees which do not get too large and which come into fruiting early.

As for dwarf stocks, there is a remarkable mixture of materials in the trade, thus accounting for much of the difficulty with dwarf plantings. Commercial beds were shown of pure strains of improved dwarfing stocks which are being introduced in the nursery trade as standard. For example, instead of speaking of Paradise and Doucin stocks, it is time that nurserymen began speaking of Type IX, which is the most dwarfing Paradise yet known; Type II, which is a Doucin type; Type I, Type XII and so on. If this were done, the resulting standardization of trees would help the industry. Wealthy, for example, when propagated on Type I makes an inferior tree. Type I is considered a Doucin type. If Wealthy is wanted as a small tree, it should be placed on Type II, and so on. These plantations have yielded as high as 25,000 salable rootstocks per acre and 40,000 quince stocks. Peat moss used at the rate of fifty bales per acre has increased the yield appreciably. Methods of layering were demonstrated and discussed.

One of the interesting complications in rootstocks is the matter of congeniality. Besides the instance of uncongeniality between Anjou and Pyrus betulæfolia, a case was shown among apples where Northern Spy, Baldwin, Early McIntosh and Macoun make excellent trees upon rootstock U. S. D. A. 227, whereas McIntosh and Delicious fail to unite and become a total loss in the orchard. Yet, McIntosh, which fails, is one of the parents of Early McIntosh, which succeeds on this stock!

Ornamental Plantings.

On return to the station grounds, Dr. R. W. Curtis, of Cornell University, conducted the group on a tour of the ornamental plantings, making most interesting and valuable practical observations upon plant materials. Of the lilacs, the different species, their origins and values were discussed. A species of the paper birch was shown which has survived severe winter cold and which seems to be of greater value than the common white birch. Among other plants discussed were various wall

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coverings, various species of malus, the more important evergreens and some of the smaller shrubby plants used for borders. Both old and new forms were treated, presenting opportunity for free exchange of opinion.

The tour concluded with an effective demonstration of spruce gall aphis control by Dr. Gambrell. Trees not properly sprayed were in serious condition, while those which had been sprayed showed immediate response with renewed growth free from infestation.

Dinner Concludes Day.

The meeting then adjourned to dinner at the Geneva Country Club, arranged by Schuyler Smith, of the W. & T. Smith Nursery Co. Paul Fortmiller showed his versatility as a song leader. W. J. Maloney presided and introduced Dr. A. B. Buchholz, director of the bureau of plant industry at Albany, who told of the work of the bureau and of its relation to the nurserymen of the state, discussing quarantines and regulatory practices. Mr. Forbush, of the Production Credit Corporation, gave a most interesting and entertaining talk replete with humor and enjoyed by all. Dr. Tukey summarized the meeting, calling attention to the opportunities that are available to nurserymen. It was recalled that horticultural literature of the past was replete with names of nurserymen—Robert Prince, of Long Island; Andrew Downing and Charles Downing, of the Hudson valley, and Patrick Barry and Mr. Willard, of western New York. More recently, due to the press of financial troubles, there has been a noticeable lack of true horticultural interest among nurserymen. With the return of things to something approaching normalcy, it would seem that it is a propitious time to encourage the dissemination and acquiring of horticultural information. Already, to meet this end, the New York State Horticultural Society has appointed a committee whose purpose it is to arrange for the interests of nurserymen on the programs of fruit growers. In turn, nurserymen could well afford to enlist the interest and support of fruit growers and amateur gardeners. This thought is not confined solely to New York state. Along this line of development the summer meeting was most successful. It promises to be the forerunner of a growing interest in technical and horticultural information.

A. A. N. NEW MEMBERS.

Not only is it gratifying to have a report from Charles Sizemore, secretary of the American Association of Nurserymen, that the dues, based on business volume, showed increase this year, but also that he announces several new members. They are as follows:

Alabama State Nurserymen's Association, H. A. Pauly, secretary, Rt. 1, Box 312, Birmingham, Ala.

Alabama Nursery & Landscape Co., Chase, Ala.

California Roses, Inc., J. H. van Barneveld, president, Box 21, Puentes, Cal.

Farmington Gardens Nursery, Walter M. Coon, Farmington, Mich.

Hedge Lawn Nurseries, Inc., Roanoke, Va.

Lacy Nursery, Box 47, Longview, Tex.

McKee Nursery, Jacksonville, Tex.

W. K. Strother, Jacksonville, Tex.

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PRESIDENT ON THE JOB.

Clarence O. Siebenthaler, new president of the American Association of Nurserymen, went right to work after his return from the Dallas convention. Early in August he spent several days, with Ex-president Miles Bryant, among the nurserymen of Chicago and vicinity, laying preliminary plans for next year's convention at Chicago. The following week he spent two days with Secretary Charles Sizemore, at Louisiana, Mo., on association matters. He was accompanied by Mrs. Siebenthaler and their young son, Bud.

A. A. N. LADIES' MEETING.

A well attended session of the Women's Auxiliary of the American Association of Nurserymen was held Monday noon, July 20, with a luncheon at the Baker hotel, Dallas, Tex.

Hostesses for the occasion were Mrs. Thomas Bell Foster, Houston; Mrs. E. L. Baker, Fort Worth, and Miss Martha Mayhew, Dallas, all delegates of the Southwestern Association of Nurserymen. The tables were bountifully laden with delicacies of the southland and beautifully decorated with the famous Texas roses. Corsages were presented to the ladies. Each also received a miniature potted cactus as a souvenir.

At a regular session of the auxiliary, customary business was disposed of and election of officers for the ensuing year was held, with the result that the following will succeed themselves for another term: President, Mrs. C. A. Chandler, Kansas City, Mo.; vice-president, Mrs. C. B. Miller, Milton, Ore.; secretary, Mrs. George White, Rutherford, N. J.; treasurer, Mrs. Harry Malter, Monroe, Mich., and corresponding secretary, Mrs. E. M. Jenkins, Winona, O.

Mrs. C. B. Miller, Sec'y.

Eastern Meetings

Washington Representative and National Reorganization Furnish Absorbing Topics at Important Trade Gatherings

EASTERN COUNCIL MEETS.

Favors Washington Representative.

Delegates of the Council of Eastern Nurserymen and visitors met with members of the Allied Retail Nurserymen's Associations at the Nelson House, Poughkeepsie, N. Y., at 6 p. m., August 19, and were entertained by the latter at dinner. D. Leslie Scott, guildmaster of the Allied Retail Nurserymen's Associations, presided as host. The allied associations are the Capital District (Albany) Nurserymen's Association, Westchester County Retail Nurserymen's Association and Central Hudson Retail Nurserymen's Association.

After dinner, the guests were taken on a brief tour over some of Dutchess county's scenic roads, returning to the Nelson House at 8:30. The evening meeting was called to order at 9 p. m. by J. Howes Humphreys, of the Andorra Nurseries, Chestnut Hill, Philadelphia.

Robert Pyle, who had attended the Dallas convention and there represented the council, presented the high lights of that meeting—the matter of reorganization of the A. A. N. and the desirability of a national representative of the organized nursery industry to look after its interests at Washington. He read a resolution, passed by the Pennsylvania Nurserymen's Association at its August meeting, pledging that association to raise its proper share of the expense of such a project, if and when other associations affiliated with the eastern council shall take similar action, and provided that this group be assured of a proper share in the direction of the project. This resolution and other aspects of Mr. Pyle's report were thoroughly discussed, and it was finally voted to present the same subject to the general meeting the next day.

August 20, at 9 a. m., there was a general exodus to the Millbrook Inn, Millbrook, N. Y., where a much larger body of delegates, members and visitors, forty in all, met for a morning session devoted mainly to two subjects, the prospects of national reorganization and the Pennsylvania resolution, formally introduced by Robert Pyle.

Discussion of the first-named subject was aided materially by the presence of Lester C. Lovett, past president of the A. A. N., who ascribed the delay of actual reorganization to the difficulty of arriving at a practicable, satisfactory plan and who voiced the sincere desire of the A. A. N. committee to arrive at such a plan.

The Pennsylvania resolution evoked no less thorough and frank discussion of the pros and cons of participating in the project of national representation. From the introduction of the resolution, the discussions broadened out considerably in several directions. At the conclusion, however, it appeared that several reservations in the minds of those present were pretty well provided for in the wording of the resolution, and it was voted unanimously that the council recommend to its member associations the adoption of resolutions to the same effect.

A committee was appointed to consult with that named by the A. A. N. as to apportioning quotas for the several states represented on the council. The expectation was voiced that at the next council meeting, set for December 10 at the Hotel New Yorker, New York, definite figures may be available.

The meeting was adjourned at 12:30 p. m. and was followed by a luncheon, which was concluded by a brief talk on "Why Nurserymen Should Grow Clematis," by J. E. Spingarn, Amenia, N. Y. In the afternoon, H. E. Downer, horticulturist at Vassar College, conducted a party of nurserymen over the college grounds. P. J. van Melle, Sec'y, Allied Retail Nurserymen's Associations.

PENNSYLVANIANS MEET.

Spend Two Days at State College.

Two days of healthful interest were spent at State College, Pa., by the members of the Pennsylvania Nurserymen's Association and the Western Pennsylvania Nurserymen's Association August 11 and 12. There was a good representation from both the eastern and western parts of the state, and a feeling of optimism prevailed.

The first day was spent in a tour of the grounds, greenhouses and lawn grass experimental plots of the Pennsylvania State College. The last-named proved of much interest in the light of a talk on lawn grasses by Prof. H. B. Musser, of the agronomy department.

Noted on the campus grounds were some fine specimen trees, including pin, red and scarlet oaks, Cladrastis lutea (tinctoria), linden, horse chestnut, elm, hemlock and pine.

A visit to the Rock View state penitentiary nursery, with its millions of tree seedlings in all stages of growth, while extremely interesting, did not sit well in the minds of the nurserymen. It was like showing a prisoner the electric chair and explaining the mechanism of the electrodes before the time of execution. In this nursery, a replica perhaps of others in the country, the visitors saw what they considered unfair competition to their legitimate businesses, kept up as the nursery is by taxes, to which nurserymen are large contributors.

The informal dinner and meeting Tuesday night, August 11, presided over by Conrad Albrecht and John Eisler, presidents, respectively, of the Pennsylvania Nurserymen's Association and the Western Pennsylvania Nurserymen's Association, was attended by some seventy-five members, friends and guests, and the short impromptu talks by State Secretary of Agriculture J. Hansell French, Dr. R. L. Watts, dean of the college of agriculture; Robert Pyle, J. Howes Humphreys, L. U. Strassburger, Rhea Elliott and others proved a happy digestive medium for the full repast.

The meeting from 9:30 a. m. to 1 p. m. Wednesday was chock full of interest. A preliminary set-up of new laws governing the sale of nursery products in the state of Pennsylvania was presented by Eugene Muller, of the DeKalb Nurseries, Norristown, Pa., and A. E. Wohlert, of the Garden Nurseries, Narberth, Pa. These laws (somewhat on the lines of those now prevailing in Oregon), which certainly contain some good points, along with perhaps some obvious pitfalls, were heatedly discussed by the members and finally referred to the legislative committee for further consideration and action.

Robert Pyle, reporting on the Dallas convention, especially that part which related to the affiliation of state associations with the national association, brought out the importance of supporting the idea of having a paid contact man for the industry at Washington, D. C., so that a watchful eye could be kept on government legislative activities.

With the reading by J. Howes Humphreys of the Jones-Norris bill, which, although having passed the Senate, was afterward shelved, because of prompt action on the part of the legislative committee of the A. A. N., together with strong representation from the Eastern Council of Nurserymen, the Pennsylvania Nurserymen's Association and the Western Pennsylvania Nurserymen's Association went on record in favor of giving financial support to the fund needed in creating the position at Washington, providing the remaining six states in the Eastern Council of Nurserymen also approve and raise their quota of the money needed for this purpose.

Prof. L. C. Chadwick, of the horticulture department at the Ohio State University, Columbus, presented a sound talk on "The Future of the Nursery Business." While he did not profess to be a seer or prognosticator, he is convinced that the future is bright for nurserymen. Regarding grading and standardization of nursery stock, he felt that no great change will be or need be made in this direction. Despite the many experiments made in the direction of growth promoters, that indefinable element of individual skill will, he said, still be the mainspring in growing good nursery products.

Soil building by the well tried out method of growing green manure crops and plowing them under will be more commonly resorted to, Professor Chadwick stated. Cost of production, merchandising, selling and advertising, as well as cooperative buying, came in for an interesting share of his remarks.

With a rousing vote of thanks to Professor Chadwick and much appreciation to Prof. R. P. Meahl, of the horticulture department at the state college, for a well balanced program, the meeting adjourned. Edwin Matthews.

FIRE AT ANDORRA.

The greenhouses of the Andorra Nurseries, Chestnut Hill, Philadelphia, Pa., were destroyed by fire on the night of August 23, and much additional damage was done to adjacent outdoor plantings by the trampling feet of 8,000 persons who massed about the blaze. It was estimated that 2,000 automobiles lined up on Ridge pike, snarling traffic nearly an hour. The flames were visible for miles around, and firemen were called from four towns. Robert L. Winter, treasurer, and his wife and two children were forced to flee from their home on the grounds when the flames scorched its sides and set fire to the roof. Damage was estimated at $10,000.

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VIRGINIA CONVENTION.

Fifth Annual Meeting.

Holding the fifth annual convention, August 17 and 18, at the Monticello hotel, Charlottesville, the Virginia Nurserymen's Association elected Kenneth McDonald, Hampton, president; Robert G. Burnet, Charlottesville, vice-president, and G. T. French, Richmond, state entomologist, secretary-treasurer. Next year's convention will be held at Virginia Polytechnic Institute, Blacksburg. The matter of holding regional meetings in several centers during the coming year was left to the executive committee, composed of the new officers and T. D. Watkins, Midlothian, and L. L. Westcott, Falls Church.

Owen G. Wood, Bristol, presided in the absence of President T. D. Watkins, detained at home by death in his family. Fred Shoosmith, Richmond, served as secretary in place of Mack Semple, resigned.

The convention was well attended, and the program aroused more interest and discussion than at any previous meeting.

Telling of the work done at the 700-acre Blandy experimental farm of the University of Virginia, near Boyce, Dr. O. E. White, director, said that there now are nearly 2,000 species and varieties of plants growing at the farm. Ambitious plans are held in connection with this arboretum, involving a scientific institution ultimately. The arboretum should be especially valuable, since it is located in a transition zone between the northern and southern floras.

Speaking on the future of the nursery industry, E. M. Quillen, Waynesboro, said it depended on the efforts of nurserymen themselves. They must become better business men individually and must abandon the old method of "every fellow for himself" and pull together to be successful. They must become better posted as to varieties and eliminate many on their list for newer and better types. There is no future, he said, in growing the cheap and common plants and then selling in competition with peddlers, department stores, drug stores and filling stations. He deplored the encroachment of the government by establishing nurseries that are supplying plant materials that should be purchased from commercial firms. This competition and the multiplicity of taxes and quarantine regulations require a united action by nurserymen to combat them.

J. W. Wharton, president of the Hedge Lawn Nurseries, Roanoke, also urged better coöperation among nurserymen in his address.

C. R. Willey, associate state entomologist, said every man working in a nursery should be taught how to recognize various insect pests and what to do to control them.

Charles F. Gillette, Richmond, landscape engineer, urged the nurserymen to appoint a committee to agree upon a uniform guarantee and follow-up service.

Discussing the future of highway planting in Virginia, H. G. Neale, landscape engineer of the state highway department, reminded the nurserymen that they have a distinct opportunity to broaden their business by spreading interest in properly planted and properly maintained roadsides throughout the state. This can be done in organized roadside improvement leagues, especially on recreational or scenic routes.

On the afternoon of the first day, a trip was made to Rose Hill, Mirador and the University of Virginia. The annual banquet was held in the evening.

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Maryland Association

Second Monthly News-Letter, Containing Cultural and Plant Notes, Issued by Secretary Julian J. Chisolm II

The second monthly news-letter of the Maryland Nurserymen's Association was sent out in August by the secretary, Julian J. Chisolm II. His report of receiving letters from members complimenting him on the first issue is quite understandable to those who read it in the August 15 issue of The American Nurseryman. More useful information on various topics appears in the second issue, which is given below with the exception of the announcement of the summer meeting, already past when this issue reaches readers.

General Information.

Dr. Langford says now is the time to spray for juniper webworm, which is prevalent over the state and injurious to all varieties of Juniperus communis. Use arsenate of lead, two pounds to fifty gallons of water. Put this on with as much pressure as possible and soak the plants thoroughly. Remember, plants should not be sprayed during the intense heat of the day or during hot spells. Serious injury may result if this precaution is not taken.

Anyone bothered with ants? Ye Editor has an enormous hill of large black ants that he has been working on for two years. One application of an 80 per cent carbon bisulfide emulsion, diluted one-half pint to ten gallons of water, forced into the ground with a spray pump, using a pint or more of solution for each square foot of area, cleaned the hill up at once.

Mr. King, of Ridgeville Nurseries, suggests a scheme which he has been using for over ten years to cut down his lumber bills for bench construction. At each periodic change of soil in the benches, they are thoroughly washed with the hose and a stiff broom. When dry, a whitewash brush is used to apply a heavy coat of crank case drainings over all the woodwork. After this has been absorbed by the wood, the beds are filled. This treatment preserves the wood and goes a long way toward controlling certain insects. He has found no injury to his plants from the oil, and in his rose and carnation benches no boards have been replaced for ten years. Any filling station will be glad to give you all the drainings you need, or save your own.

For computing weights of balls, M. G. Coplen has found by actual weighing one cubic foot of clay loam varies from 100 to 110 pounds, depending on the moisture contents. On digging, soil increases one-sixth in bulk. In other words, if you figure on moving soil from an area measuring six cubic yards you really haul seven cubic yards on your truck.

Surtees, in his new book on nursery cost findings, puts 100 per cent overhead on labor for landscape work and explains the reason why. He cautions you not to forget overhead and profit in figuring a job.

Good blue grass seed should weigh twenty-one to twenty-two pounds to the bushel. It is not uncommon to find 9 to 14-pound seed being sold. We understand the crop is going to be short this year; so place your orders early and demand the heavy seed.

New Plants of Interest.

Betula tristis—A shrub three to twelve feet high with slender pendulous branches and broadly ovate leaves two inches long.

Cratægus lauta—A spiny tree-like shrub with dark green ovate, shallowly lobed, serrate leaves. The orange red fruits, three-fourths of an inch long, are borne in clusters of five to ten in great abundance.

Dianthus Winteri Meg Gardner—A hybrid strain of garden pink, resembling Dianthus plumarius, but with larger flowers and somewhat larger, bluer foliage. Early-blooming, of rather upright growth, with white flowers having a crimson center.

Dianthus Winteri Mrs. Back—Of less upright habit than the preceding variety, having white flowers with crimson purple centers and with the outer margins of the petals finely toothed.

Dianthus Winteri Mrs. Wormald—Similar in habit to the above, but with pink flowers having a crimson center. All of these varieties propagate freely from cuttings.

Rock Creek Nurseries have a hemlock, selected some years ago from a group of Tsuga canadensis seedlings. It is decidedly columnar in habit and of a dense, compact growth. The color varies little with the season and is a good dark green. Grafts have developed true to form. It would be well for you to keep your eye on this plant, as it certainly has its place in the landscape planting.

Expediting Rooting of Cuttings.

Much interest is being shown the past few months in the use of growth substances to expedite the rooting of various cuttings. The following is a summary by L. C. Chadwick of a contribution of the Boyce Thompson Institute on "The Effect of Growth Substances on the Rooting Response of Cuttings." This is the first important paper dealing with the effect of these substances on woody cuttings. The author suggests that some of the compounds may have considerable commercial value in stimulating root growth on the cuttings of species and varieties that are normally difficult to root. The materials used in the tests were either obtained from R. H. Manske, of the National Research Council, Ottawa, Can., or the Eastman Kodak Co., Rochester, N. Y., or were made in the laboratory of the institute. It is probable that some of the materials can be obtained from other sources. The data recorded will be presented briefly, rather than in considerable detail. Only the most effective treatments are given in each case. The cuttings were treated by placing their basal ends (½ to ¾-inch) in the solutions for varying periods of time. Upon their removal, the cuttings were stuck in a mixture of sand and peat moss, one-half of each by volume.

Hardwood cuttings of American holly, Ilex opaca, rooted well in five weeks after their basal ends had been soaked in 10 mg. of indoleacetic acid per 100 c.c. of water (roughly 1 gram per 10.5 quarts) for 54 hours or in 2 mg. per 100 c.c. of naphthaleneacetic acid for 4 days. Effectiveness of the treatments was shown by earlier rooting, more roots, a larger root system and the emergence of the roots over a greater portion of the cutting.

Hardwood cuttings of Japanese holly, Ilex crenata, responded best after a treatment with 0.4 to 2 mg. per 100 c.c. of indolebutyric acid for 16 to 24 hours or with 2 to 5 mg. per 100 c.c. of naphthaleneacetic acid for 16 to 24 hours.

Other most effective treatments were as follows: Japanese spurge, Pachysandra terminalis, dormant cuttings treated with naphthaleneacetic acid, 2 to 10 mg. per 100 c.c. for 1 day, 0.4 to 5 mg. for 3 days and 0.1 to 2 mg. for 6 to 9 days. Lilac, Syringa vulgaris, softwood cuttings treated with naphthaleneacetic acid, 1 to 2 mg. per 100 c.c. for 24 hours. Japanese yew, Taxus cuspidata, hardwood cuttings treated with naphthaleneacetic acid, 4 mg. per 100 c.c. for 24 hours.

As a rule, treatment of hardwood shrub cuttings, without leaves, did not prove very beneficial. Also cuttings of most woody plants did not respond readily to lanolin paste preparations of the growth substances. Cuttings of Japanese maple, Acer palmatum, were one of the few types which responded to lanolin preparations containing 25 to 100 mg. of indolepropionic acid per gram of lanolin. The lanolin paste was placed on the basal part of the cutting while it still remained attached to the plant. Cuttings were not removed from the parent plant until one to three weeks after treatment. Good roots were produced in twenty-four days after the cuttings were placed in the rooting medium.

The authors bring out the following facts in the discussion of the tests: (1) While considerable stimulative effect on rooting of woody cuttings has been noted, the results vary with the method of application of the growth substances to the cuttings and with the maturity of the wood. Water solutions have been more effective than lanolin paste preparations in most cases. (2) Cuttings of Ilex opaca probably could be stimulated to produce roots with lower concentrations than those used if treated for longer periods of time. (3) Relatively high concentrations for short periods are likely to be more effective than low concentrations for long periods. The authors state that "from the practical standpoint, however, the use of low concentrations (approximately 1 mg. per 100 c.c.) for several days would be preferable because of the smaller amount of growth substances required and the greater margin of safety resulting from this type of treatment." My opinion would be that this would be less practical from a commercial standpoint since under such conditions, where many thousands of cuttings are made each day, the requirements of obtaining the necessary containers and the bother of having the cuttings around for a number of days would nearly offset the benefits derived from the treatment. Where only a few cuttings are to be treated, such a condition would not exist. (4) Since the treatments often exert a retarding influence on the bud growth the authors

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believe that these materials may have some use with cuttings that develop a rapid shoot growth, but are slow in rooting. Evergreen cuttings taken in January, February and March may be benefited by a treatment of this type. (5) Lanolin preparations of the growth substances promote callus formation and prevent water loss from cut surfaces. This being the case, the authors believe it may have some use in treating pruning wounds and cavities in trees and also the treatment of graft unions. Limited tests of the use of lanolin paste containing indoleacetic acid on Japanese maple grafts at Ohio State University this past winter did not prove effective in producing better results than obtained by the usual treatment. (6) Probably no one treatment will prove equally effective for all cuttings of plants of different genera and species. Each person attempting to use these materials should carry out preliminary tests to determine the best concentrations of material to use. (7) One of the benefits mentioned by the authors is the tendency for root production all along the stem or at least over an increased area. In commercial practice such a tendency would often be a detrimental condition.

For those interested in trying tests the following data may be useful: 1000 mg. (milligrams) equal 1 gm. (gram); 28.3 grams equal 1 ounce; 1,000 c.c. (cubic centimeters) equal 1 liter; 1 liter equals approximately 1.06 quarts.

While the use of some of these growth-promoting substances has given some striking results, it is doubtful if their use will revolutionize commercial methods of vegetative propagation.

Propagating Trailing Arbutus.

Epigæa repens, trailing arbutus, may be propagated successfully by cuttings provided certain precautions are taken. A sufficient supply of moisture must always be present and protection from too intense sunlight. Probably the presence of a mycorrhizal fungus in the soil is also essential. Cuttings root readily along the rhizome when placed in live spaghnum, native soil, peat moss, or peat moss and sand. Cuttings made in late August included the current and previous season's growth. August or September cuttings gave a higher percentage of rooting than spring cuttings. Rooted cuttings kept in the greenhouse the first winter continued growth and did better than similar cuttings in a coldframe. There was a big difference in the percentage of germination of seeds from different fruits. The range was from 0.3 to 87.3 per cent. The germination was higher in seeds planted soon after the fruits matured. Seeds can be germinated either on moist filter paper over peat or in a soil mixture (equal parts of peat moss, sand, leaf mold and No. 2 sod). Cuttings and seeds grew well in a soil mixture of pH value 4.65. Thrifty growth of epigæa may be obtained over a wide range of soil acidity.

THE buildings of the C. H. Marsh Nursery, Gary, Ind., were destroyed by fire July 30. The loss was estimated to be $15,000.

S. SCHERER & SONS, operating as the Northport Nurseries, Northport, N. Y., received first prize for their exhibit at the flower show of the Nathan Hale Garden Club of Huntington recently.

Surplus Lining-Out Stock!

2000 Juniperus Depressa Plumosa (Andorra Juniper), 3-year, field-grown, 12 to 15 ins. spread. **$15.00** per 100.

2000 Retinispora Plumosa Aurea, 3-year, field-grown, sheared, 18 to 24 ins. **$15.00** per 100.

1000 Retinispora Plumosa Aurea, 2-year, field-grown, cut back, 15 to 18 ins. **$12.00** per 100.

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Austrian Pine, 2 to 4 feet, heavy, bare rooted, **$35.00** per 100. Balled and Burlapped, **$45.00** per 100. Pines shipped only within the Japanese Beetle area.

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Coming Events

FALL SHOW AT CHICAGO.

Nurserymen to Participate.

Nurserymen are expected to contribute extensively to the displays that are scheduled to be included in the first annual International Horticultural Exposition in the International Amphitheater at the Union Stock Yards, Chicago, September 12 to 20. The premium list discloses several classes for garden plantings, and there are other classifications for special nursery stock.

Called for in the plantings are the following: A perennial border, with trees and shrubs as background; an outdoor living room, stressing usableness as well as beauty, covering 500 square feet; a cutting border or border of mixed annuals, a border of hardy chrysanthemums, a rock garden, a formal garden, foundation planting or informal garden; a color garden of annuals and/or perennials, and a green garden. There are also classes for balled and burlapped specimens of spruces, pines, junipers and arbor-vitæ in designated sizes. Prizes up to $250 for the larger gardens are offered contestants.

The International Horticultural Exposition Association has been incorporated to conduct this event as a non-profit institution along the same lines as the world-famous International Live Stock Exposition has been developed during many years. All phases of horticulture will be represented in the exposition, and members of the various branches have places on the managing board. Charles Fiore, nurseryman and landscape architect of Prairie View, Ill., is a member of the executive committee and will install an elaborate Italian garden as a special feature.

Members of the American Association of Nurserymen are to supply evergreens and other plant stocks for the "Hanging Gardens of Babylon," which will feature the arena displays. The hanging garden will be a replica of the original, measuring 106 feet high by forty-nine feet wide.

No Charge for Educational Exhibits.

W. H. Manss, director, has sent an announcement to correct the understanding of some of the nurserymen that if they make a display of their products, they will be charged for space. All nurserymen making displays which will be educational and assist in beautifying the exposition and which carry a card of standard size giving the name of the owner and his address, will be furnished the necessary space gratis, for he is helping the exposition along educational lines as well as himself. There will be no entry fee for competitive entries or displays.

CALIFORNIA CONVENTION.

While the program of addresses published in the August 15 issue indicated much of interest in the sessions of the joint convention of the California Association of Nurserymen and the Pacific Coast Association of Nurserymen, September 17 to 19, a recent announcement of H. A. Marks, president of the California association, calls attention to the important things being done for nurserymen of the state and for the stabilization of the industry, to come up for discussion. The convention is to be held in the new municipal auditorium at San Jose, Cal., with the Central California Nurserymen's Association as host. The following important subjects are mentioned by President Marks in his letter:

"A definite cost survey of nursery stock is being undertaken either by the state of California department of agriculture or by the University of California. Learn all about how we expect to stabilize prices by finding actual costs, something no other state has as yet done.

"The state has already completed an inventory survey of deciduous fruit trees available for next year. The intention is to yearly make an inventory of all nursery stock so that you can more intelligently outline your growing operations.

"The association intends to introduce into the next California legislature a proposed act to legalize grades and standards of nursery stock and have it enforced through the state department of agriculture.

"A marketing agreement on deciduous fruits has already been approved by the state. It now awaits signature of the nurserymen.

"Southern California has gone ahead with an organization providing for stabilization of prices and an arbitration agreement to eliminate unfair practices, etc. Do we want to cover the state with this idea? Learn what it's all about and take part in the discussion."

TEXAS PROGRAM.

The annual convention of the Texas Association of Nurserymen will be held September 2 and 3, at Austin, in the roof garden of the Stephen F. Austin hotel. Space has been allotted in the convention hall by the hotel management for displays of nursery products.

Speakers have been chosen to address the convention on a variety of outstanding topics of current trade interest.

Although there is much business to come before the convention, time has been allotted for a luncheon at the hotel at noon, September 2, and a barbecue at Barton springs in the evening of the same day. Barton springs is in one of the large parks in Austin, where anyone can take a swim if he desires.

The association extends a cordial invitation to all nurserymen to attend, whether members or not.

ELECTION AT BEAUMONT.

At the annual meeting of the Beaumont Florist and Nurserymen's Association held last month, officers were elected as follows: President, W. C. Griffing; vice-president, Carl Johnson; secretary, A. C. P. Tyler.

Mr. Griffing, in accepting the presidency, presented a brief outline of the things he hoped to attain for the association during the new year.

Immediate plans will be made for staging a floral and horticultural show in the city during the fall. Definite appointment of committees will be made shortly in order that the plans can get under way immediately for this undertaking.

Mr. Griffing also gave a brief report of the American Association of Nurserymen's convention at Dallas, including a summary of the plan of reorganization.

This organization holds monthly business meetings and has heretofore sponsored many civic undertakings, flower shows, etc.

SOUTHWESTERN APPOINTMENTS.

The new president of the Southwestern Association of Nurserymen, Lige Glass, Farmersville, Tex., has appointed the following legislative committee: J. M. Ramsey, Austin, Tex., chairman; Lee Mosty, Center Point, Tex.; E. A. McIlhenny, Avery Island, La., and the chairman of the legislative committee of the Arkansas association and also of the Oklahoma association, with President Glass an ex officio member.

The 1937 convention will be held at San Antonio, Tex., the third week in June. Gus Lingner will be in charge of local arrangements.

During the coming year the association will have as its objects closer coöperation and more uniform inspection laws among the four states it covers—Texas, Louisiana, Oklahoma and Arkansas.

STARK QUITS NURSERY.

Major Lloyd C. Stark, Democratic nominee for governor, has resigned as chairman of the board and general manager of the Stark Bros. Nurseries & Orchards Co., Louisiana, Mo., it was announced at Jefferson City Monday, August 10. Major Stark resigned before he left for a vacation trip to the east. He will devote his full time to the forthcoming election.

He had been general manager of the nursery and one of its executive heads since his return from the World war in 1919. Prior to the war he was a vice-president from 1912 to 1917. The nursery was founded by his great-grandfather, James Hart Stark, in 1816.

CATALOGUE NURSERYMEN!

The sensational new Boysenberry has passed the experimental stage. It has conclusively proved that it is not only the largest and most prolific, but also the most delicious vineberry that has ever been produced. It will pay you to catalogue it and to make reservation for plants previous to October 1. We have plants growing from Virginia to Oregon and California, and are in position to serve you well. Boysenberries stood 10 degrees below zero last winter. Send for our pictorial pamphlet.

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PEACH QUARANTINE HEARING.

A public hearing to consider the advisability of quarantining the states of California, Colorado, New Mexico, Texas and Utah on account of the peach mosaic disease will be held before the bureau of entomology and plant quarantine of the United States Department of Agriculture, Washington, D. C., at 2 p. m. September 14.

The peach mosaic disease was first observed in Texas in 1931 by federal inspectors and was identified by the bureau of plant industry as a previously unknown virus disease. The presence of this disease has since been determined in California, Colorado, New Mexico and Utah. Special investigations begun in 1931 by the United States Department of Agriculture to determine the cause of the disease and the methods of control have resulted in finding that the disease is communicable and is spreading in the manner of a contagious disease, but the exact cause or nature of the contagion is unknown. From this information it appears advisable to prohibit or restrict the shipment of peach and nectarine trees and parts thereof from the infected states in an effort to prevent its spread to other peach districts.

With the onset of the disease, a peach mosaic infected tree develops shortened internodes, the blade and leaf axils start intergrowth in profusion, and the leaf blades develop striking mosaic patterns and in many instances are small, narrow, irregular in outline and crinkly. After the disease appears there is a notable decrease in the average size of the fruit, which is apt to be irregular in shape, and the texture of the pulp is inclined to be pithy.

The hearing is called by the Secretary of Agriculture in accordance with the plant quarantine act in order that any person interested in the proposed quarantine may appear and be heard, either in person or by attorney.

HEARING ON SATIN MOTH BAN.

A public hearing to consider the advisability of either revoking the domestic satin moth quarantine or revising the regulations to designate the state of Oregon as infested with that insect will be held before the bureau of entomology and plant quarantine of the United States Department of Agriculture, Washington, D. C., at 10 a. m. September 14.

The satin moth, although not widely prevalent in the United States, has been known to exist for some time in some areas in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and Washington. Recently it was discovered in Oregon. It appears necessary, therefore, either to revoke the quarantine, or to include Oregon in the quarantine, now covering the other infested states. The quarantine prohibits the movement from infested areas of poplar and willow trees or parts of these trees capable of propagation.

The hearing is called by the Secretary of Agriculture in accordance with the plant quarantine act so that any person interested in the proposed revocation or extension of the quarantine may appear and be heard either in person or by attorney.

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LAKE COUNTY ENTERTAINS.

Nurserymen from all parts of the country assembled at Painesville, O., August 20, when the Lake County Nurserymen's Association entertained the Ohio and the Western Pennsylvania Associations. Many acquaintances were made, and band music, furnished by Call's Nurseries, was enjoyed during the luncheon hour, after which everyone proceeded to North Perry park, where the Ohio Nurserymen's Association conducted a business meeting, presided over by A. N. Champion, of Perry, president.

A feature of this session was a vigorous attack by Benjamin F. Greening, president of the Greening Nursery Co., Monroe, Mich., directed against the present federal administration for its entry into the nursery business through various departments of its activities. He declared that the tracts of land laid out by the government to grow seedlings will accomplish the production program in no less time than private nurseries could grow the stock and the cost to the government will probably be seventy-five per cent greater.

Howard Chard, of Storrs & Harrison Co., reported on the Dallas convention of the A. A. N. A resolution was adopted to seek funds for maintaining a representative at Washington to look after trade interests.

Walter J. Marion, chief of the state division of plant industry, discussed the inspection of nursery stock and what was needed to raise inspection standards. Additional funds must be secured either by legislative appropriation or by license fees for that purpose, he stated.

Many interesting matters were brought before the association. The business meeting adjourned at 4 p. m., when everyone gathered at the ball park, where a soft ball game was played between the Lake county association and the Ohio association. There were several tables of bridge in progress for the ladies, and during the afternoon refreshments were served. During this time the band played several selections.

At 7 a delicious chicken dinner was served at Keener's Inn, on the grounds, 150 nurserymen and their wives being served.

At 8:30 dancing was begun, and during the evening many floor show numbers were put on. The evening's entertainment was under the supervision of Paul J. Schumaker, president of the Lake County Nurserymen's Association. A prize waltz was the feature of the evening, and souvenirs were passed out during the dance.

A tour of the nurseries throughout the county was made on the following day.

COAST NURSERY EXPANDS.

Pacific Coast Nursery, Inc., Portland, Ore., has started excavating for a new warehouse on property leased from the Southern Pacific railroad at Canby, Ore. The new building will be 50x120 feet and will provide space not only for storage, but for grading young trees.

This is the first year for the firm in Canby. The main office is in Portland, with acreages scattered throughout Washington and Oregon. Yakima, Wash., is the location of the main nursery. Martin Holmason, manager at Canby, reports an unusually successful growing season.

NEW JERSEY OUTING.

Toward noon, August 18, in the hills of northern New Jersey near Lake Lenape, members of the New Jersey Association of Nurserymen gathered for the annual midsummer meeting and outing. The Perona farm buildings, where the meeting was held, are not so rustic as they sound, being of the Hollywood Spanish mission style, with stuccoed walls and red-tiled roofs and surrounded by borders gay with flowers. Nothing daunted by the rather sumptuous surroundings, the nurserymen soon proceeded to make themselves at home. Lunch was served promptly at 12 o'clock, after which a short business meeting was held.

Fred Osman, reporting for the market development committee, stated that, due to the efforts of the members in the association, the enrollment in the New York Herald Tribune yard and garden contest had reached record heights. Considerable discussion ensued on the value of such a contest as a business-builder for nurserymen.

Mr. Bettes, of the statistical bureau of the New Jersey department of agriculture, gave a short talk on the value of cost records and what he hoped to accomplish with the help of the members.

A program of sports followed the meeting. A spirited contest developed among the horse-shoe pitching enthusiasts, and the soft ball game developed into a battle of the Titans, requiring all of the firmness and authority of the umpire, Dr. Headlee, to restrain the players, who put all they had into the game regardless of results. The game finally broke up when it could not be decided whether the score was 108 to 16 in favor of Jennings' Rangers or 128 to 24 in favor of "Doc" Martin's Bear Cats.

Swimming was later enjoyed in the attractive pool, and several of the more proficient aquatic artists, led by Fritz Hendrick, gave impromptu diving exhibitions, some being so eager to show their wares they did not even wait to change their clothes.

At 6 o'clock all sat down to an excellent chicken dinner, made more enjoyable by music and songs.

FOR thirty-two years connected with the Elizabeth Nursery Co., Elizabeth, N. J., Walter R. Shaw died August 14 at the age of 71.

AT THE age of 82, Elias S. Black, nurseryman of Little Silver, N. J., died August 8. Mr. Black was mayor of Little Silver and was serving his sixth 3-year term. His widow and two sisters survive.

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